

REMARKS

STATUS OF CLAIMS

The foregoing amendments cancel Claims 1, 8-22, 30-35 and 39-49. Of these, Claims 8-21, 30-35 and 39-49 were withdrawn from examination pursuant to a restriction requirement, and Applicant reserves the right to file a divisional application presenting for examination the subject matter of these non-elected claims. Claims 2-7, 24-25, 27-29 and 36-38 are pending in the application. Reconsideration of this application in light of the above amendments and the following remarks is respectfully requested.

OBJECTION TO ABSTRACT

The Office Action objected to the abstract of the disclosure, on the ground that the existing abstract is configured to have two paragraphs, rather than one paragraph. The foregoing amendments convert the abstract from a two-paragraph format to a one-paragraph format. In addition, pursuant to a PTO requirement, Applicant is enclosing a separate sheet which has the amended abstract thereon. It is respectfully submitted that the abstract is now in proper form, and notice to that effect is respectfully requested.

OBJECTION TO NEW MATTER

A previously-filed Amendment added a sentence on page 1 of the specification. This added sentence claimed the priority of a provisional application, and also incorporated by reference the disclosure of that provisional application. The Office Action objected under 35 U.S.C. §132 to the portion of the sentence which sought to effect incorporation by reference, indicating that it introduced new matter into the disclosure of the present invention. The foregoing amendments revise this sentence by removing the portion that would effect an incorporation by reference. It is respectfully submitted that the amended sentence does not introduce any new matter into the disclosure, and is in compliance with the provisions of 35 U.S.C. § 132.

OBJECTION TO DEPENDENT CLAIMS

The Office Action raised an objection to dependent Claims 24-25 and 27-29, on the ground that they each included a reference to Claim 23, which was previously canceled. The foregoing amendments adjust Claims 24-25 and 27-29 so that they no longer refer to canceled Claim 23. This should eliminate the problem underlying the objection, and notice to that effect is respectfully requested.

FUNCTIONAL CLAIM LANGUAGE

The Office Action objected to Claims 1-7, asserting that they include functional language. This ground of objection is respectfully traversed, for the following reasons.

In explaining this objection, the Office Action offered some specific examples of perceived problems. One such example was the language in Claim 4 reciting that "markings are attached" to a base member. The Office Action asserted that this phrase describes a method step of attaching markings, rather than a structural limitation. Applicant respectfully disagrees. Claim 4 recites "markings", which is a structural limitation. Claim 4 goes on to specify that these markings "are attached" to a base member, which is also a structural limitation.

A different example presented in the Office Action is the phrase "substances being fixed" in Claim 7. The Office Action does not offer any explanation of why this particular phrase is perceived to be a problem, but the basis for the objection is apparently the same as the basis for the objection to "markings are attached". As discussed above, the phrase "markings are attached" is a structural limitation. For the same basic reasons, Applicant respectfully submits that the phrase "substances being fixed" is a structural limitation, rather than a method step.

A further consideration is that the Office Action refers to MPEP §2114 and the case law cited there, and states that "an apparatus must be distinguished from the prior art in terms of structure rather than function". However, this statement appears in a sentence of MPEP §2114 which also emphasizes that the elements "of an apparatus may be recited either structurally or functionally". This fundamental principle is emphasized in various other sections of the MPEP. For example, MPEP §2173.05(g) states that although a functional limitation seeks to define something by what it does

rather than what it is, "functional language does not, in and of itself, render a claim improper". Similarly, MPEP § 2173.01 states that: "Applicant may use functional language . . . or any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought". MPEP § 2173.01 concludes with a statement that "a claim may not be rejected solely because of the type of language used to define the subject matter for which patent protection is sought". For reasons discussed in the preceding paragraph, it is not clear that the claim language quoted in the Office Action is actually functional rather than structural. But even assuming it could somehow be interpreted to be functional, the objection to Claims 1-7 appears to do precisely what is expressly prohibited by MPEP §2173.01. In particular, the Office Action objects to Claims 1-7 "solely because of the type of language used to define the subject matter for which patent protection is sought ". This is improper, and it is respectfully submitted that the objection must be withdrawn.

Summarizing, Applicant respectfully submits that the Office Action is objecting to certain claim language as functional, when in fact the language is structural rather than functional. Moreover, even assuming that the language could somehow be interpreted to be functional, the MPEP makes it very clear that the elements of an apparatus may be properly defined using either structural or functional language. The Office Action does precisely what is expressly prohibited by MPEP §2173.01, in particular by objecting to Claims 1-7 "solely because of the type of language used to define the subject matter for which patent protection is sought ". For these reasons, it is respectfully submitted that the objection to Claims 1-7 is improper, and is respectfully requested that this objection be withdrawn.

SECOND PARAGRAPH OF 35 U.S.C. § 112

The Office Action rejected Claims 22, 24-25, 27-29 and 36 under the second paragraph of 35 U.S.C. §112 as indefinite. It is clear from the accompanying explanation that this rejection was prompted by language which appeared in Claim 22. The foregoing amendments cancel Claim 22. However, the language from Claim 22 which underlies the rejection has been added to each of Claims 24 and 36, in order to place Claims 24 and 36 in independent form. Consequently, since the language in

question is still present in Claims 24 and 36, the §112 rejection is discussed below, even though Claim 22 has been canceled. In particular, the §112 rejection is respectfully traversed.

First, the Office Action identifies several separate limitations within the claim language in question, and then makes the conclusory statement that it is unclear what is encompassed by one particular limitation which recites "making a base member". The Office Action gives no clear indication of why the recitation of "making a base member" should be viewed as unclear or indefinite. The Office Action does state that selecting a shape for the base member and making the base member are recited as independent steps, with the implication that this is wrong. However, Applicant respectfully submits that there is nothing inherently wrong with this, because selecting the shape of a base member does not necessarily have to be a part of the process of actually making the base member.

Separately from this, the Office Action indicates that it is not clear how the recitation of "positioning and fixing substances" differs from the recitation of "selecting the location of the substances for detection". Applicant respectfully disagrees, because "selecting the location of the substances for detection" does not necessarily have to be a part of the process of "positioning and fixing substances for detection".

At the end of the explanation of this §112 rejection, the Examiner states that "Applicant has not pointed to a passage in the specification to support amendments". However, Applicant is not aware of any rule or other requirement which specifies that, when amending claims, an applicant must explain how the claim language is supported by the disclosure.

For the foregoing reasons, it is respectfully submitted that the indicated limitations in Claims 24 and 36 (which were derived from Claim 22) are properly definite under the second paragraph of 35 U.S.C. §112, and notice to that effect is respectfully requested.

INDEPENDENT CLAIM 24

Claim 24 previously depended from Claim 22. The foregoing amendments introduce the limitations of Claim 22 into Claim 24, in order to place Claim 24 in

independent form. Claim 24 was rejected under 35 U.S.C. § 102 as anticipated by Stimpson U.S. Patent No. 6,037,186. However, this ground of rejection is respectfully traversed, for the following reasons.

The PTO specifies in MPEP §2131 that, to anticipate a claim, a reference must teach every element of the claim. In the present application, Claim 24 has a limitation reciting that:

in said positioning step, a suspension or semiliquid incorporating a substance for detection with a predetermined chemical structure, is positioned by being painted, dispensed, imprinted, drawn up, impregnated or stored onto said base member at a location which corresponds to the chemical structure.

To support the rejection of this language from Claim 24, the Stimpson patent must disclose each and every element recited in this language. It is respectfully submitted that the Stimpson patent fails to do so, and therefore does not anticipate Claim 24 under §102. Claim 24 is thus believed to be allowable, and notice to that effect is respectfully requested.

INDEPENDENT CLAIM 36

Claim 36 previously depended from Claim 22. The foregoing amendments introduce into Claim 36 the limitations of Claim 22, in order to place Claim 36 in independent form. The Office Action rejected Claim 36 under 35 U.S.C. §102 as anticipated by the Stimpson patent. This ground of rejection is respectfully traversed, for the following reasons. As noted above, MPEP § 1331 provides that, in order to anticipate a claim, a reference must teach every element of the claim. Claim 36 recites that, "by passing a heating fluid or a cooling fluid through an integrated support, an integrated minute vessel, or a permeable membrane, the integrated support, integrated minute vessel, or permeable membrane is heated or cooled respectively".

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The PTO specifies in MPEP §2131 that, to anticipate a claim, a reference must teach every element of the claim. In the present application, Claim 24 has a limitation reciting that:

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To support the rejection of this language from Claim 24, the Stimpson patent must disclose each and every element recited in this language. It is respectfully submitted that the Stimpson patent fails to do so, and therefore does not anticipate Claim 24 under §102. Claim 24 is thus believed to be allowable, and notice to that effect is respectfully requested.

INDEPENDENT CLAIM 36

Claim 36 previously depended from Claim 22. The foregoing amendments introduce into Claim 36 the limitations of Claim 22, in order to place Claim 36 in independent form. The Office Action rejected Claim 36 under 35 U.S.C. §102 as anticipated by the Stimpson patent. This ground of rejection is respectfully traversed, for the following reasons. As noted above, MPEP § 1331 provides that, in order to anticipate a claim, a reference must teach every element of the claim. Claim 36 recites that, "by passing a heating fluid or a cooling fluid through an integrated support, an integrated minute vessel, or a permeable membrane, the integrated support, integrated minute vessel, or permeable membrane is heated or cooled respectively".

Applicant respectfully submits that Stimpson does not teach each and every element recited in this excerpt from Claim 36. Applicant therefore respectfully submits that, since Stimpson does not disclose each and every element recited in Claim 36, Claim 36 is not anticipated by Stimpson. Claim 36 is thus believed to be allowable, and notice to that effect is respectfully requested.

INDEPENDENT CLAIM 7

Claim 7 previously depended from Claim 1. The foregoing amendments introduce into Claim 7 the limitations of Claim 1, in order to place Claim 7 in independent form. Claim 7 was rejected under 35 U.S.C. §103 as obvious in view of a combination of teachings from the Stimpson patent and Lipshutz, U.S. Patent No. 5,856,174. This ground of rejection is respectfully traversed. Applicant respectfully submits that Stimpson and Lipshutz fail to establish a *prima facie* case of obviousness under 35 U.S.C. §103 with respect to Claim 7. In this regard, the PTO recognizes in MPEP §2142 that:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of non obviousness.

It is respectfully submitted that, in the present case, Stimpson and Lipshutz do not factually support a *prima facie* case of obviousness with respect to Claim 7, for the mutually exclusive reasons which follow.

1. Even when combined, the references do not teach the claimed subject matter.

The Stimpson and Lipshutz references, even when combined, do not teach the subject matter of Claim 7. In this regard, the provisions of §103 specify that:

A patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. (Emphasis added).

Thus, when evaluating a claim for obviousness, all limitations of the claim must be evaluated. However, neither Stimpson nor Lipshutz teach that “a linear homoiothermal member is embedded inside said base member and/or an auxiliary member for heating or cooling purposes”. Consequently, it is impossible for Stimpson and Lipshutz to render obvious the subject matter of Claim 7 as a whole, and the explicit terms of §103 cannot be met. Therefore, for this independent reason alone, it is respectfully submitted that Claim 7 is not obvious under §103 in view of Stimpson and Lipshutz, and notice to that effect is respectfully requested.

2. Prior art that teaches away from the claimed invention cannot be used to establish obviousness.

In evaluating obviousness under §103, it is not proper to selectively consider only part of a reference, while ignoring other parts that teach away from the invention. In this regard, the provisions of MPEP § 2141.02 specify that:

A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. (Emphasis in original).

In the present application, Claim 7 recites that “a linear homoiothermal member is embedded inside said base member and/or an auxiliary member for heating or cooling purposes”. The Office Action concedes that Stimpson does not disclose this structure. As to Lipshutz, the Office Action relies on lines 1-4 of column 19, where Lipshutz explains that “the amplification chamber will incorporate a controllable heater disposed within or adjacent to the amplification chamber, for thermal cycling of the sample”. To the extent Lipshutz teaches that a heater is provided in association with a

chamber used to process samples, rather than being provided within the samples themselves, it is respectfully submitted that Lipshutz teaches away from a support configured so that "a homiothermal member is embedded inside said base member and/or auxiliary member for heating or cooling purposes". Since it is well recognized that teaching away from the claimed invention is a per se demonstration of lack of prima facie obviousness, it is respectfully submitted that Stimpson and Lipshutz do not factually support a prima facie case of obviousness with respect to Claim 7.

Accordingly, for this independent reason alone, it is respectfully submitted that Claim 7 is not obvious under §103 in view of Stimpson and Lipshutz, and notice to that effect is respectfully requested.

3. The combination of references is improper.

Even assuming that the foregoing arguments do not apply (which is clearly not the case), there is yet another independent and compelling reason why the Stimpson and Lipshutz references cannot be combined under §103 to reject Claim 7. In this regard, MPEP § 2142 provides that:

To reach a proper determination under §103, the examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made Knowledge of applicant's disclosure must be put aside in reaching this determination, . . . impermissible hindsight must be avoided, and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

Here, neither Stimpson nor Lipshutz teaches or even suggests the desirability of the combination, because neither teaches that "a linear homiothermal member is embedded inside said base member and/or an auxiliary member for heating or cooling purposes". Thus, it is clear that neither reference provides any incentive or motivation supporting the desirability of the combination. Consequently, there is simply no basis in

the art for combining these two references to support a §103 rejection. In this regard, the MPEP further provides in § 2143.01 that:

The mere fact the references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.
(Emphasis in original).

It is respectfully submitted that there is no showing, suggestion, incentive or motivation in either Stimpson or Lipshutz for combining them so as to meet the subject matter of Claim 7. Accordingly, for this independent reason alone, it is respectfully submitted that Claim 7 is not obvious under §103 in view of Stimpson and Lipshutz, and notice to that effect is respectfully requested.

DEPENDENT CLAIMS

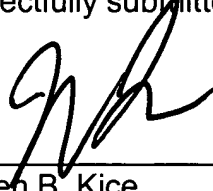
Claims 2-6 and 37-38 depend from and further limit independent Claim 7, and are also believed to be allowable, for example for the same reasons discussed above with respect to Claim 7. Claims 25 and 27-29 depend from and further limit independent Claim 24, and are also believed to be allowable, for example for the same reasons discussed above with respect to Claim 24.

CONCLUSION

Claims 2-7, 24-25, 27-29 and 36-38 are under consideration in the present application. In view of the foregoing amendments and remarks, allowance of Claims 2-7, 24-25, 27-29 and 36-38 is respectfully requested. The Examiner is invited to call the undersigned at the below-listed telephone number if, in the opinion of the

Examiner, such a telephone conference would expedite or aid the prosecution and examination of this application.

Respectfully submitted,



Warren B. Kice
Reg. No. 22,732

Date: 5/4/9
Haynes and Boone, LLP.
901 Main Street, Suite 3100
Dallas, Texas 75202-3789
Telephone: 214-651-5634
Facsimile: 214-651-5940
File: 10287.41

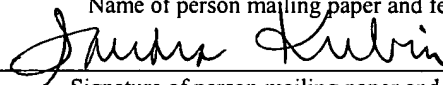
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Sandra Kubin

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